

REMARKS

Claim 21 has been amended to include the limitations of dependent claim 24 (now canceled). Is it believed that this amendment places Claim 21 in condition for favorable action and allowance.

Claims 1 and 15-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Bullmore. Claims 15-20 have been canceled.

With respect to claim 1, Applicant has amended the claim to more particularly claim the circuit. In particular, Applicant claims not only the normally-open and normally closed detection circuits coupled to the switch, but also certain sub-circuits within each detection circuit. Applicant further claims enable/disable circuitry and operation in response to first and second control signals. One control signal is processed to control whether the normally-open and normally-closed detection circuits are enabled, and operation in this manner is mutually exclusive. This enabling control is beneficial because the two detection circuits are coupled to receive input from a same switch, but generate separate outputs. Only one of the detection circuits should be enabled at a time, and this selective enablement is effectuated in response to the logic state of the received first control signal. The other control signal is processed to control whether detection is being made as to either a transition to high voltage or a transition to low voltage with respect to the input received from the switch. This enabling control is beneficial in situations for either opening or closing of the switch, since the received input can transition to either a high or low voltage depending on user configuration of the switch connections. Selective enablement to detect transition to high or transition to is effectuated in response to the logic state of the received second control signal. The claimed circuitry is thus fully configurable in response to the control signals for selecting not only whether normally-open closure or normally-closed opening is detected, but also whether such is indicated in the received input from the switch by either a transition to low voltage or a transition to high voltage.

There is no teaching or suggestion is Bullmore for having a normally-open detection circuit and a normally closed detection circuit being coupled to receive input from a same switch.

Rather, Bullmore teaches separate circuits 10, 20 and 30 being used for separate switches SWA, SWB and SWC, respectively.

There is no teaching or suggestion in Bullmore for having the plural detection circuits, as coupled to receive input from a same switch, respond to a first control signal to be enabled/disabled in the mutually exclusive manner claimed by Applicant. To the extent Bullmore provides for enable control, such is done so on an individual circuit 10, 20 and 30 basis. There is no enablement coordination among and between two circuits, where those two circuits receive input from a same switch, so that only one or the other of the two circuits is enabled.

There is no teaching or suggestion in Bullmore for having each detection circuit support detection based on both transition to high voltage and transition to low voltage on the received input from the switch. Even further, Bullmore fails to teach or suggest operation which responds to a second control signal specifying which one of the transition to high voltage and transition to low voltage detections is to be enabled with respect to monitoring the input signal from the switch (i.e., configuring the circuit for low versus high transition detection).

In view of the foregoing, Applicant respectfully submits that claim 1 is in condition for favorable action and allowance.

Claims 2-3, 8-9 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bullmore in view of Youssef. Claims 2-3 and 8-9 are patentable over the art for at least the reasons claim 1 is patentable. Claims 22-23 are patentable over the art for at least the reasons claim 21 is patentable.

New claim 27 has been added. Claim 27 is based on previously pending Claim 1.

In claim 27, Applicant claims that the normally-open and normally closed detection circuits are coupled to receive input from the same switch. As discussed above, there is no teaching or suggestion in Bullmore for having a normally-open detection circuit and a normally closed detection circuit being coupled to receive input from a same switch. Rather, Bullmore teaches separate circuits 10, 20 and 30 being used for separate switches SWA, SWB and SWC, respectively.

Still further, in claim 27 Applicant claims that each of the normally-open detection circuit and a normally closed detection circuit include enabling circuitry which selectively enables detection circuit operation in response to a received enable signal. Applicant further claims a control circuit responsive to a control signal for generating the first and second enable signals to have opposite logic states (see, NOT gate and the NO and NC inputs of blocks 3 and 5 in Figure 1). Responsive to the control signal and the generated enable signals, only one of the normally-open detection circuit and the normally closed detection circuit is enabled at a time. This enabling control is beneficial because the two detection circuits are coupled to a same switch, but generate separate outputs. Bullmore fails to teach the connection, control and enablement circuitry and functionality claimed.

Applicant submits that claim 27 is in condition for favorable action and allowance.

In view of the above amendment and remarks, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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